

REMARKS

Applicant, his principal representative in Germany, and the undersigned have carefully reviewed the first Office Action of April 25, 2008 in the subject U.S. patent application, in which the time for response is being concurrently extended by one month, or until August 25, 2008, together with the prior art cited and relied on by the Examiner in the rejections of the claims. In response, the Substitute Specification and claims have been amended. It is believed that the claims which are now pending in the subject U.S. patent application are patentable over the prior art cited and relied on, taken either singly or in combination. Reexamination and reconsideration of the application, and allowance of the claims is respectfully requested.

As described in the Substitute Specification, as depicted in the drawings, and as recited in the claims, the subject invention is directed to a rotogravure printing unit. As may be seen in Fig. 1 of the drawings, a printing cylinder 06 is supported for rotation and cooperates with a counter-pressure cylinder 07 to print a web of material 09 which is passing between the printing cylinder and the counter-pressure cylinder. The printing cylinder carries a gravure printing plate which has a plurality of recesses or cavities that are filled with ink from an ink trough 03 of an inking unit 02. The ink so applied to the gravure printing plate is transferred to the web of material 09, as that web passes through the printing nip defined by the printing cylinder and the counter-pressure cylinder.

At least three inking rollers 04 act to transfer ink from the inking unit to the printing cylinder. The printing cylinder has a printing cylinder barrel length and each of the at least three inking rollers has a roller barrel length. The barrel length of each of the

at least three inking rollers is less than the printing cylinder barrel length. In other words, no single one of the at least three inking rollers has a barrel length as great as the barrel length of the printing cylinder.

As may be seen quite clearly in Fig. 4 of the drawings filed in the subject U.S. application, and as described in detail in paragraph 033 of the Substitute Specification, these at least three inking rollers are staggered in the inking unit with respect to the printing cylinder. These three inking rollers could be staggered in the circumferential direction of the printing cylinder, in the longitudinal direction of the printing cylinder, or in both the circumferential and longitudinal directions of the printing cylinder. The provision of such staggering of the ink rollers, with respect to the printing cylinder, overcomes the disadvantages of the use of a single inking roller, whose length is the same as that of the printing cylinder. The combination of the provision of the at least three inking rollers in the inking unit, and their staggering with respect to the printing cylinder, overcomes the limitations of the prior arrangements of a single inking roller, as depicted in Figs. 2 and 3 of the drawings filed in the subject application.

In the first Office Action of April 25, 2008, claim 33 was objected to as being in improper form. It was presented as an independent claim but should have been a dependent claim. Claim 33 has been amended to now depend from currently amended independent claim 18.

Claims 18-21, 23 and 26-30 were rejected under 35 USC 102(b) as being anticipated by U.S. patent No. 6,109,181 to Kamoda. Claim 22 was rejected under 35 USC 103(a) as being unpatentable over Kamoda in view of U.S. patent No. 6,354,700 to Roth. Claim 24 was rejected under 35 USC 103(a) as being unpatentable over

Kamoda in view of U.S. patent No. 6,684,784 to Kolbe. Claim 25 was rejected under 35 USC 103(a) as being unpatentable over Kamoda in view of U.S. patent No. 5,980,141 to Donnis. Claim 30 was rejected under 35 USC 103(a) as being unpatentable over Kamoda in view of U.S. patent No. 6,283,023 to Christmann. Claim 32 was rejected, also under 35 USC 103(a), as being unpatentable over Kamoda in view of U.S. patent No. 5,046,417 to Paulson. Claim 33 was rejected under 35 USC 103(a) as being unpatentable over Kamoda in view of U.S. patent No. 1,259,394 to Gutberlet.

In the course of the preparation of the present Amendment, the Substitute Specification was reviewed. Several minor typographical errors and errors in the conversion of the marked-up copy of the specification to the Substitute Specification were noted. These are corrected by the present Amendment. These minor changes do not constitute any new matter. Their entry into the subject application is respectfully requested.

Both of independent claims 18 and 19 have been amended to more clearly define the present invention over the prior art references cited and relied on by the Examiner. As will be discussed below, it is believed that these claims, as filed, and even more clearly as amended, are patentable.

Turning initially to the Kamoda reference, there is depicted an inking device for a printing machine. While the English language translation of the Japanese priority application is difficult to read and understand, it appears that a plate cylinder 4, as seen in Fig. 1, cooperates with what is referred to as a "pushing barrel" 5 and which is believed to be a counter-pressure cylinder or a blanket cylinder. An ink train is

supported above the plate cylinder 4 and uses a number of rollers to supply ink to three forme rollers 13a, 13b and 13c.

In his discussion of the Kamoda reference, the Examiner asserts, among other things, that "...each one of said inking rollers have a roller barrel with a roller barrel length, with the length of each of the inking rollers being less than the printing cylinder length..." In support of this assertion, the Examiner relies on Fig. 1 and references elements 13a-13c.

While it is acknowledged that elements 13a-13c are described as ink forme rollers, it is clear, from a careful review of the entire Kamoda reference that there is no discussion of their lengths. The mere importation of a claim limitation into the discussion of a prior art reference does not somehow provide a teaching of that limitation in that reference. The Examiner's contention of inking roller barrel length being less than the printing cylinder barrel length is not supported by any teaching of the Kamoda reference. There is no discussion of the length of the three ink forme rollers 13a-13c in the reference. There are no plane views that include a depiction of the plate cylinder 4 and the three ink forme rollers 13a-13c. As may be seen in Fig. 2, the ends of each of the three ink forme rollers 13a-13c are all spaced at the same distance from one of the side frames 1. These three ink forme rollers 13a-13c are positioned against two rollers 9a and 9b that are referred to as "swing rollers." A careful reading of the Kamoda reference shows that these two "swing rollers" 9a and 9b are caused to move axially, in a reciprocating manner, by a "swinging mechanism" 11. These two rollers 9a and 9b thus move axially with respect to the three ink forme rollers 13a-13c.

There is not depiction, in Fig. 2, of the plate cylinder 4. In the absence of any such depiction or discussion, the logical assumption is that plate cylinder 4 has a length that is essentially the same as that of each one of the three forme rollers 9a-9c. Since the purpose of those forme rollers 9a-9c is to transfer ink to the plate cylinder, it is logical to assume, in the absence of any teaching or suggestion to the contrary, that each would have a length the same as the length of the plate cylinder. The ends of the plate cylinder 4, which is not depicted in Fig. 2, could not extend beyond the frame 1. From a practical standpoint, the ends of such a plate cylinder 4 could not extend beyond the ends of the three forme rollers 13a-13c. If the plate cylinder ends did extend beyond the ends of the ink forme rollers 13a-13c, they would not receive any ink. The only conclusion that can be drawn from a careful review of the Kamoda reference is that there is no support for the Examiner's assertion of inking rollers having barrel lengths each less than a barrel length of a cooperating plate cylinder. It is thus believed that independent claims 18 and 19, as filed, are not anticipated by the Kamoda reference.

Claim 18, as filed, recites that the three inking rollers are each supported for independent movement relative to the printing cylinder. No such structure is shown in the Kamoda reference. As may be seen quite clearly in Fig. 2 of Kamoda, both of forme rollers 13a and 13b are supported by the support for the swing roller 9a. Forme roller 13c is supported by the support for the swing roller 9a. Forme roller 13c is supported by the support for the swing roller 9b. While it could be possible that rollers 13a and 13b are movable separately from roller 13c, it is equally clear that rollers 13a and 13b are not independently movable, relative to each other. Claim 18 is thus again not anticipated by the Kamoda reference.

Claim 19 recites that at least one of the inking rollers overlaps the others of the at least three inking rollers in the axial direction of the printing cylinder. In the Kamoda reference, as discussed above, there is first no discussion of inking rollers with lengths less than that of the plate cylinder. In Kamoda, as best as can be determined, all three of the forme rollers 13a-13c are of the same length. Absent any teaching or evidence to the contrary, that is a conventional configuration. Thus, there is no overlap, as that term is understood in the context of the subject invention. Kamoda again does not anticipate claim 19, as filed.

Both of claims 18 and 19 have been amended to further differentiate their claimed structures over the prior art cited and relied on. Both of claims 18 and 19 now recite that the three inking rollers, each of whose barrel length is less than the barrel length of the printing cylinder, are staggered in the inking unit, with respect to the printing cylinder. The language added to claims 18 and 19 has been taken from claim 25, which has now been cancelled.

Claim 25 was rejected as being obvious over the Kamoda reference, in view of U.S. patent No. 5,980,141 to Donnis. It was asserted in the Office Action that Donnis teaches "...that the inking rollers are staggered," referring to Column 3, lines 60-68. A careful review of the Donnis reference clearly demonstrates that it is not relevant from a technology perspective and that it is even less relevant from a structural standpoint.

In Donnis, there is described an ink jet printer for printing sheets of paper. An ink jet printer does not use inking rollers. It does not have an inking unit. It does not have an ink trough in which the inking rollers are supported. As is quite well known in the art, an ink jet printer uses jets of ink that are discharged from a movable print head onto a

substrate to be printed. In such a device, there is no printing cylinder. It is thus not readily apparent to the undersigned how any teachings of Donnis could be combined with any teachings of Kamoda.

In Donnis, as seen in Fig. 1, sheets of paper are supplied from a ream of paper 18 that is held in a feeding tray 13. Individual sheets are fed around a sheet feeding machine, generally at 17, past an ink jet print head 12. That print head 12 is supported so that it will move transversely across the width of each sheet of paper.

A plurality of inner paper first rollers 27a move the sheets from the feeding tray 13, through the sheet leading mechanism 17 and past the ink jet print head 12. These rollers 27a are driven, by a gear drive assembly, as seen at the left of Fig. 2, from a main motor. Three counter-rotating rollers 58 are placed against the first roller 27a. As may be seen in Fig. 1, these three counter-rotating rollers 58 are located at the junction of the feeding tray 13 with the sheet feeding members. They are carried by a shaft 59, which is also driven by the main motor 26. Their purpose, as recited very clearly at the top of Column 4, is to prevent double that feeding from the feeding tray 13.

It is clear that the Examiner has cited the Donnis reference merely because it recites that the three rollers 58 are "staggered." The mere use of a word does not make a reference relevant or combinable with another reference. The rollers 58 of Donnis are sheet feeding rollers. They are not inking rollers. Donnis does not use any inking rollers. It is not combinable with the Kamoda reference in any meaningful manner.

Claims 18 and 19 are again believed to be clearly patentable over the prior art cited and relied on. Both of these claims recite structure that is not shown, or suggested in the prior art cited and relied on. All of the other claims now pending in the application

depend, either directly or indirectly from one or the other of believed allowable, currently amended claims 18 and 19. All of the dependent claims are thus also believed to now be allowable. The various other secondary references, which were cited to show the individual features of the several dependent claims, do not teach or suggest the features which are missing from the primary Kamoda reference.

SUMMARY


The substitute specification of the application has been amended to correct several minor errors, without adding any new matter. The two independent claims and the majority of the dependent claims have been amended. A one-month extension of the time for response is being requested concurrently.

It is believed that the claims now pending in the subject U.S. patent application are patentable over the prior art cited and relied on, taken either singly or in combination. Allowance of the claims, and passage of the application to issue is respectfully requested.

Respectfully submitted,

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August 25, 2008
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Attorney Docket: W1.2058 PCT-US